

# Receiving Report

126133

Date: 13/6/26

Batch No: MA 6133

Supplier: THYssenKrupp

Dart P/O: 20247

Packing Slip: Yes ☒ No ☐  
 Invoice: Yes ☐ No ☒  
 Receipt: Cash ☐ Cr ☒

Release Note Attached: Yes ☒ No ☐ N/A ☐  
 Waybill Attached: Yes ☐ No ☒ N/A ☐  
 Shipment Complete: Yes ☒ No ☐ N/A ☐  
 QC6 Inspection ☒ N/A ☐  
 Work Order ☒ N/A ☐

## Discrepancies

Part Number	Description	Quantity Ordered	Quantity Received	Quantity Returned	Quantity Short	Comments

Initials of receiver (if shipment OK) Level 12

Production/Admin: 13/6/26  
 Date  
 Received/Costing  
 Initial

Location

# Purchase Order Receipt Listing

Wednesday, June 26, 2013 7:49:24 AM

All amounts are calculated in domestic currency.

All Vendors PO ID PO20247 Receipt Dates from 6/26/2013 to 6/26/2013 All Line Item Types  
All Item ID/GL/WOs All Rec. Employees All Currencies  
Grouped by Vendor ID

Purchase Order ID/ Curr Type	Line Nbr/ Insp	Project ID	Reference/ Description/ Cert Std	PO U/M / Stock U/M	Required Date	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
Vendor ID \ Vendor Name			VC-COP001	Thyssenkrupp Materials CA Ltd							
PO20247	1		M7075T6B4.000X4.5 f 00		6/28/2013	6/26/2013	15.4200	\$87.26	0.0000	0	\$1,345.47
CAD	No		7075-T6 BAR 4.000' f X 4.500"		15.4200	DES102		\$1,345.47	0.0000	0	
			m126133								
	2		M7075T6B2.250X02. f 750		6/28/2013	6/26/2013	120.0000	\$29.14	0.0000	0	\$3,496.31
	No		7075-T6 BAR 2.250' f X 2.750"		120.0000	DES102		\$3,496.31	0.0000	0	
			m126133								
	3		M7075T6B3.000X04. f 500		6/28/2013	6/26/2013	124.6666	\$62.56	0.0000	0	\$7,799.68
	No		7075-T6 BAR 3.000' f X 4.500"		124.6666	DES102		\$7,799.68	0.0000	0	
			m126133								
	4		M7075T6B6.000X6.0 f 00		6/28/2013	6/26/2013	12.0830	\$163.64	0.0000	0	\$1,977.22
	No		7075-T6 BAR 6.000' f billets)		12.0830	DES102		\$1,977.22	0.0000	0	
			m126133								

Total Received Quantity: 272.1696  
Total Qty to Inspect (PO U/M): 0.0000  
Total Reject Quantity: 0.0000  
Total Receipt Value: \$14,618.68  
Total Balance Due Quantity: 0.0000

# B I L L O F L A D I N G

No: PEC 828926  
Ship Date 25Jun13 at 8:00 From PFW

Ship From: THYSSENKRUPP MATERIALS NA  
2821 LANGSTAFF ROAD  
CONCORD, ONTARIO L4K 5C6  
Tel: 905 669 9444 Fax: 905-738-9033

Probill  
Via VIM TRANSFER  
FOB CONCORD  
Frt PREPAID  
Route 0- 0 Manifest  
Vhcle Trailer  
Slp STAN IVERS (905-532-1350)  
Sold To: (20115)  
DART AEROSPACE  
1270 ABERDEEN ST  
HAWKESBURY, ON K6A 1K7

Ship To: (1)  
DART AEROSPACE  
1270 ABERDEEN ST  
HAWKESBURY, ON K6A 1K7  
Tel: 613-632-9577 Fax: 613-632-1053

## B I L L O F L A D I N G

1) Our Order PEC-579331- 1 Your PO # 20247  
ALUMINUM PLATE 7075-T651  
4.00" THICK X 4.5000" X 9.2500"

MTR ✓

Heat Number	Tag No	Quantity	PCS	Wt LBS
717489	192418	5.78 SFT	20	358

2) Our Order PEC-579331- 2 Your PO # 20247  
ALUMINUM PLATE 7075-T651  
2.250" THICK X 2.7500" X 144.0000"

MTR ✓

Heat Number	Tag No	Quantity	PCS	Wt LBS
383331	192419	27.50 SFT	10	963

3) Our Order PEC-579331- 3 Your PO # 20247  
ALUMINUM PLATE 7075-T651  
3.00" THICK X 4.5000" X 34.0000"

MTR ✓

Heat Number	Tag No	Quantity	PCS	Wt LBS
401841	192421	31.88 SFT	30	1470
717246	192422	14.88 SFT	14	686
Total:		46.75 SFT	44	2156

4) Our Order PEC-579331- 4 Your PO # 20247  
ALUMINUM PLATE 7075-T651  
6.00" THICK X 6.0000" X 7.2500"

MTR ✓

Heat Number	Tag No	Quantity	PCS	Wt LBS
324071	192424	1.51 SFT	5	132
310191	192425	1.21 SFT	4	105
348891	192426	0.91 SFT	3	79
348891	192428	0.91 SFT	3	79
587641	192429	1.51 SFT	5	132

Page: 1 ....Continued

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TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ETRE  
RAPPORTEES IMMEDIATEMENT

ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY

RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT  
MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER

RECU EN BONNE CONDITIONS / RECEIVED IN GOOD CONDITION

DATE

TVQ/OST# 1017327981 TQ001 TPS/GST TVH/HST # 140223934 RT0001

SHIP FROM: THYSENKRUPP MATERIALS NA  
2821 LANGSTAFF ROAD  
CONCORD, ONTARIO L4K 5C6  
Tel: 905 669 9444 Fax: 905-738-9033

SHIP DATE 25Jun13 at 8:00 From PFW  
Probill  
Via VIM TRANSFER  
FOB CONCORD  
Frt PREPAID  
Route 0- 0 Manifest  
Vhcle Trailer  
Slp STAN IVERS (905-532-1350)  
Sold To: ( 20115)  
DART AEROSPACE

SHIP TO: ( 1)  
DART AEROSPACE

B I L L O F L A D I N G

Total:

6.04 SFT

20

527

TOTAL: Tags 9 PCS 94 LBS 4004

MILL TEST REPORTS, PACKING SLIPS ARE TO SENT  
WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR  
TO SHIPPING.

ATTN: CHANTAL/LINDA

\*\* ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER \*\*  
\*\* REFERENCED ON IT \*\*

TOTAL 3 SKIDS, 1 BDL G.W. 4129 LS

ITEM (1) SKID  
ITEM (2) BDL  
ITEM (3) SKID  
ITEM (4) SKID

\*CUSTOMER PICK-UP HRS AT THYSENKRUPP MATERIALS NA  
CONCORD, ONT.\* \*\*\* 9:00 AM TO 4:00 PM \*\*\*  
\*\*\*\* TEL. 800-926-2600 \*\*\*\*

\*\*\*\*\*  
\* WE STOCK STAINLESS STEEL \*  
\* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT \*  
\*\*\*\*\*  
\*\*\*PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE  
ADDED TO EVERY ORDER.\*\*\*

Page: 2 .... Last

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE  
RAPPORTÉES IMMÉDIATEMENT

ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY

RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT  
MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER



## INSPECTION CERTIFICATE № 13.5841

EN 10204 - 3.1



Certified by Russian Register

Consigner: KAMENSK URALSKY METALLURGICAL WORKS 5, Zavodskaya Str., Kamensk Uralsky, Sverdlovsk Region, 623405, Russia Tel: (3439) 39 52 22 Fax: (3439) 39 50 68				JOINT STOCK COMPANY						
Consignee: Thyssen Krupp Materials NA				Quantity: 2						
Contract number: N14184-S 5400170463-R01				Specification No: N14184						
Article number: ALFLR00369				Lot No: 1 Package No: 617365, 617366						
Description of Goods: Plates				Requirements on the Products:						
Grade of Product		Dimensions, inch/mm		Material conforms to quality of alloy: 7075 T651						
		4.03"x60.5"x144.5" 102.360X1536.7X3670.3		Product conforms to all requirements of: ASTM-B209-10, AMS-QQ-A250/12AMS4045K. This product conforms to European Union RoHS Directive 2002/95/EC						
Mechanical Properties										
The Condition of Tested Standards	Lot Number	Cast Number	Number of Tests	Tensile Strength		Yield Strength (0.2% offset)		Elongation, %		Hardness, HB
				ksi	ksi	ksi	ksi	ksi	ksi	
				min	max	min	max	min	max	
Required	717489	20-5739	2	-	-	-	-	-	-	-
				78.9	80.3	69.4	71.0	9.5	9.5	-
Chemical Composition, %										
Element	Silicon Si	Iron Fe	Copper Cu	Manganese Mn	Magnesium Mg	Chromium Cr	Nickel Ni	Zinc Zn	Titanium Ti	Zirconium Zr
Required	0.4	0.5	1.2-2.0	0.3	2.1-2.9	0.18-0.28	-	5.1-6.1	0.2	-
Contents	0.08	0.19	1.6	0.09	2.5	0.18	-	5.9	0.08	-
Element	Ti+Zr	Na	Tin Sn	Bismuth Bi	Plumbum Pb	Mn+Cr	Ca	Other Elements		Al
								Each	Total	
Required	-	-	-	-	-	-	-	0.05	0.15	remainder
Contents	-	-	-	-	-	-	-	0.05	0.15	remainder
Other Tests										
Method	Macro-structure	Micro-structure	UT	Electro-conductivity	SCF	Contents H2 of metals cm3/100gr	Mercury - Free "Russia is country of melt and manufacture"			
Result	-	-	-	-	-	0.22				

On behalf:

OAO KUMZ

Date:

26.02.13

Inspector:

K.V.Zyryanova

Inspection Department engineer:

N.V. Alekhina



# CERTIFIED TEST REPORT

Constellium Rolled Products Ravenswood, LLC

2

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN

46544

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI

48086

COPPER&BR N68205 4075 INCLUSION SERIAL#: 20130422N68205 PAGE 1 OF 3

CUSTOMER PURCHASE ORDER NO. & ITEM 5400175333				Constellium ORDER NO. 110-512983	
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 2.28000	WIDTH 60.500	LENGTH 144.500
ITEM ORDERED MOLD PLATE-DIST. GE SPEC PLATE, SAWED MILL					
CUSTOMER SPECIFICATION AMS-QQ-A-250/12					
PART NUMBER ALFLR01001		B/L NUMBER N68200		DATE SHIPPED 04/22/13	
WEIGHT SHIPPED 8,420		NO. OF PIECES 4		GOVT. CONTRACT NO.	

**CERTIFICATION**  
"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."

Constellium Rolled Products Ravenswood, LLC  
Rt 2 South, Century Road  
P.O. BOX 66  
RAVENSWOOD, WV 26164 USA

*Rodney J. Felty*  
Rodney J. Felty - Laboratory Manager

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS										
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN	MAX									
383331	LT	2	***** T651 79.3	79.8	69.4	69.5	***** 12.5	13.0											
All material contained in lot 383331 was cast and manufactured in the USA.																			
-----																			
ALL LOTS ON THIS CERTIFICATION ALSO CONFORM TO THE FOLLOWING REQUIREMENTS																			
-----																			
ASTM B209-10 AND AMS 4045K																			
CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.
	SEE ACTUAL CHEMICAL COMPOSITION																		
	ALUMINUM REMAINDER																		

P-860-155D (06/11)

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402545983

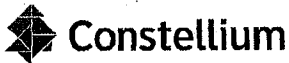
CstAr

CstOr 249568

Wgt.: 963.000 LB

Date 06/20/2013

*John R. Zambetti*



COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN

46544



**CERTIFIED TEST REPORT**  
Constellium Rolled Products Ravenswood, LLC

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI

48086

COPPER&BR N68205 4075 INCLUSION SERIAL#: 20130422N68205 PAGE 2 OF 3

CUSTOMER PURCHASE ORDER NO. & ITEM 5400175333				Constellium ORDER NO. 110-512983		<b>CERTIFICATION</b> "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."  <b>Constellium Rolled Products Ravenswood, LLC</b> Rt 2 South Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA  <i>Rodney J. Felty</i> Rodney J. Felty - Laboratory Manager
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 2.28000	WIDTH 60.500	LENGTH 144.500	
ITEM ORDERED MOLD PLATE-DIST GE SPEC PLATE, SAWED MILL						
CUSTOMER SPECIFICATION <u>AMS-QQ-A-250/12</u>						
PART NUMBER ALFLR01001		B/L NUMBER N68200		DATE SHIPPED 04/22/13		
WEIGHT SHIPPED 8,420		NO. OF PIECES 4		GOVT. CONTRACT NO.		

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS										
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN	MAX									
383331	C		ACTUAL CHEMICAL COMPOSITION																
			SI= 0.06	FE= 0.15	CU= 1.51	MN= 0.04	MG= 2.54												
			CR= 0.19	ZN= 5.61	TI= 0.02	ZR= 0.01													
			OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER																
CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.
	SEE ACTUAL CHEMICAL COMPOSITION																		
	ALUMINUM REMAINDER																		

P-860-155D (06/11)

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402545983

CstAr

CstOr 249568

Wgt.: 963.000 LB

Date 06/20/2013

*John R. Zambetti*



# CERTIFIED TEST REPORT

Constellium Rolled Products Ravenswood, LLC

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN

46544

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI

48086

COPPER&BR N68205 4075 INCLUSION SERIAL#: 20130422N68205 PAGE 3 OF 3

CUSTOMER PURCHASE ORDER NO. & ITEM 5400175333				Constellium ORDER NO. 110-512983	
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 2.28000	WIDTH 60.500	LENGTH 144.500
ITEM ORDERED MOLD PLATE-DIST GE SPEC PLATE, SAWED MILL					
CUSTOMER SPECIFICATION AMS-QQ-A-250/12					
PART NUMBER ALFLR01001		B/L NUMBER N68200		DATE SHIPPED 04/22/13	
WEIGHT SHIPPED 8,420		NO. OF PIECES 4		GOVT. CONTRACT NO.	

**CERTIFICATION**

"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."

**Constellium Rolled Products Ravenswood, LLC**  
Rt 2 South, Century Road  
P.O. BOX 68  
RAVENSWOOD, WV 26164 USA

*Rodney J. Felty*  
Rodney J. Felty - Laboratory Manager

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS												
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN	MAX											
THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW.																					
CHEMISTRY BY OES: ARKSPARK																					
CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT.																					
WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399.																					
WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8; B557.																					
Mark Paperwork: ALFLR01001																					
DUNS Number: 090570149; CAGE Code: 1YWL9																					
Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the manufacture of our product.																					
"END OF CERTIFICATION"																					
CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS			
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.		
	SEE ACTUAL CHEMICAL COMPOSITION																				
	ALUMINUM REMAINDER																				

P-860-155D (06/11)

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402545983

CstAr

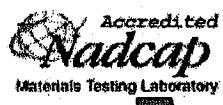
CstOr 249568

Wgt.: 963.000 LB

Date 06/20/2013

*John L. Zambetti*





**CERTIFIED TEST REPORT**  
Constellium Rolled Products Ravenswood, LLC

**COPPER & BRASS SALES**  
1015 SAINT JEROME STREET  
MISHAWAKA IN 46544

**COPPER & BRASS SALES**  
P.O. BOX 5116  
SOUTHFIELD MI 48086

**COPPER&BR P12605 4075 INCLUSION SERIAL#: 20130522P12605 PAGE 1 OF 3**

CUSTOMER PURCHASE ORDER NO. & ITEM <b>5400179097</b>				Constellium ORDER NO. <b>110-513101</b>	
ALLOY <b>7075</b>	CLAD. <b>00</b>	TEMPER <b>T651</b>	GAUGE <b>3.00000</b>	WIDTH <b>60.500</b>	LENGTH <b>144.500</b>
ITEM ORDERED <b>MOLD PLATE-DIST GE SPEC PLATE, SAWED MILL</b>					
CUSTOMER SPECIFICATION <b>(AMS-QQ-A-250/12)</b>					
PART NUMBER <b>ALFLR01006</b>		B/L NUMBER <b>P12600</b>		DATE SHIPPED <b>05/24/13</b>	
WEIGHT SHIPPED <b>11,120</b>		NO. OF PIECES <b>4</b>		GOVT. CONTRACT NO.	

**CERTIFICATION**  
"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."  
  
Constellium Rolled Products Ravenswood, LLC  
Rt 2 South Century Road  
P.O. BOX 68  
RAVENSWOOD, WV 26164 USA  
  
*Rodney J. Felty*  
Rodney J. Felty - Laboratory Manager

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS										
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN	MAX									
401841	LT	2	***** T651 80.8	82.0	70.8	71.9	***** 12.0	12.5											
All material contained in lot 401841 was cast and manufactured in the USA.																			
-----																			
ALL LOTS ON THIS CERTIFICATION ALSO CONFORM TO THE FOLLOWING REQUIREMENTS																			
-----																			
ASTM B209-10,AMS 4045K																			
CHEM COM	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.		
	SEE ACTUAL CHEMICAL COMPOSITION																		
	ALUMINUM REMAINDER																		

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402545986  
CstAr  
Wgt.: 2,156.000 LB  
CstOr 249568  
Date 06/20/2013  
*John J. Smith*

Wgt.: 2,156.000 LB

Cstlar

Cust. THYSSENKRUPP MATERIALS NA - ECAD

Del.: 2402545986

Cstor 249568

Date 06/20/2013

**Constellium**

**COPPER & BRASS SALES**  
**1015 SAINT JEROME STREET**  
**MISHAWAKA IN**

46544



# **CERTIFIED TEST REPORT**

Constellium Rolled Products Ravenswood, LLC

**COPPER & BRASS SALES**  
**P.O. BOX 5116**  
**SOUTHFIELD MI**

48086

**COPPER&BR P12605 4075 INCLUSION SERIAL#: 20130522P12605 PAGE 2 OF 3**

CUSTOMER PURCHASE ORDER NO. & ITEM <b>5400179097</b>				Constellium ORDER NO. <b>110-513101</b>	
ALLOY <b>7075</b>	CLAD. <b>00</b>	TEMPER <b>T651</b>	GAUGE <b>3.00000</b>	WIDTH <b>60.500</b>	LENGTH <b>144.500</b>
ITEM ORDERED <b>MOLD PLATE-DIST GE</b>					
<b>SPEC PLATE, SAWED MILL</b>					
CUSTOMER SPECIFICATION <b>AMS-QQ-A-250/12</b>					
PART NUMBER <b>ALFLR01006</b>		B/L NUMBER <b>P12600</b>		DATE SHIPPED <b>05/24/13</b>	
WEIGHT SHIPPED <b>11,120</b>		NO. OF PIECES <b>4</b>		GOVT. CONTRACT NO.	

**CERTIFICATION**

"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."

Constellium Rolled Products Ravenswood, LLC  
 Rt 2 South Century Road  
 P.O. BOX 68  
 RAVENSWOOD, WV 26164 USA

*Rodney J. Felty*  
 Rodney J. Felty - Laboratory Manager

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS										
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN	MAX									
401841	C		ACTUAL CHEMICAL COMPOSITION																
			SI= 0.06	FE= 0.13	CU= 1.51	MN= 0.03	MG= 2.64												
			CR= 0.20	ZN= 5.55	TI= 0.03	ZR= 0.01													
			OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER																
CHEM COM P	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.		
		SEE ACTUAL CHEMICAL COMPOSITION																	
ALUMINUM REMAINDER																			

P-860-15SD (06/11)

*John J. Smith*

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402545986  
 CstAr  
 Wgt.: 2,156.000 LB  
 Date 06/20/2013



**COPPER & BRASS SALES**  
 1015 SAINT JEROME STREET  
 MISHAWAKA IN 46544



**COPPER & BRASS SALES**  
 P.O. BOX 5116  
 SOUTHFIELD MI 48086

**CERTIFIED TEST REPORT**  
 Constellium Rolled Products Ravenswood, LLC

**COPPER&BR P12605 4075 INCLUSION SERIAL#: 20130522P12605 PAGE 3 OF 3**

CUSTOMER PURCHASE ORDER NO. & ITEM <b>15400179097</b>				Constellium ORDER NO. <b>110-513101</b>	
ALLOY <b>7075</b>	CLAD. <b>00</b>	TEMPER <b>T651</b>	GAUGE <b>3.00000</b>	WIDTH <b>60.500</b>	LENGTH <b>144.500</b>
ITEM ORDERED <b>MOLD PLATE-DIST GE SPEC PLATE, SAWED MILL</b>					
CUSTOMER SPECIFICATION <b>AMS-QQ-A-250/12</b>					
PART NUMBER <b>ALFLR01006</b>		B/L NUMBER <b>P12600</b>		DATE SHIPPED <b>05/24/13</b>	
WEIGHT SHIPPED <b>11,120</b>		NO. OF PIECES <b>4</b>		GOVT. CONTRACT NO.	

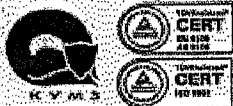
**CERTIFICATION**  
 "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."

Constellium Rolled Products Ravenswood, LLC  
 Rt 2 South Century Road  
 P.O. BOX 68  
 RAVENSWOOD, WV 26164 USA

*Rodney J. Felty*  
 Rodney J. Felty - Laboratory Manager

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS										
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.									
<p>THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE.</p> <p>THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW.</p> <p>CHEMISTRY BY OES: ARKSPARK</p> <p>CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT.</p> <p>WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399.</p> <p>WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8; B557.</p> <p>Mark Paperwork: ALFLR01006</p> <p>DUNS Number: 090570149; CAGE Code: 1YWL9</p> <p>Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the manufacture of our product.</p> <p>"END OF CERTIFICATION"</p>																			
CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.
	SEE ACTUAL	CHEMICAL COMPOSITION																	
		ALUMINUM REMAINDER																	

*John R. Smith*



## INSPECTION CERTIFICATE № 12.38494

EN 10204 - 3.1



Certified by Russian Register

Consigner: KAMENSK URALSKY METALLURGICAL WORKS JOINT STOCK COMPANY 5, Zavodskaya Str., Kamensk Ural'sky, Sverdlovsk Region, 623405, Russia Tel: (3439) 39 52 22 Fax: (3439) 39 50 68										
Consignee: Thyssen Krupp Materials NA				Quantity: 2						
Contract number: N14048-S 5400184285-R01				Specification No: N14048						
Article number: ALFLR01008				Lot No: 1 Package No: 814611						
Description of Goods: Plates				Requirements on the Products:						
Grade of Product		Dimensions, inch/mm		Material conforms to quality of alloy: 7075 T651						
		3.03"X60.5"X144.5" 76.960X1536.7X3670.3		Product conforms to all requirements of: ASTM-B209-10/AMS-QQ-A250/12AMS4045K. This product conforms to European Union RoHS Directive 2002/95/EC						
Mechanical Properties										
The Condition of Tested Standards	Lot Number	Cast Number	Number of Tests	Tensile Strength		Yield Strength (0.2% offset)		Elongation, %		Hardness, HB
				ksi	ksi	ksi	ksi	ksi	ksi	
				min	max	min	max	min	max	
Required	717246	20-5588	4	71.0	-	58.0	-	5.0	-	-
				81.1	81.8	70.7	71.0	8.6	12.5	-
Chemical Composition, %										
Element	Silicon Si	Iron Fe	Copper Cu	Manganese Mn	Magnesium Mg	Chromium Cr	Nickel Ni	Zinc Zn	Titanium Ti	Zirconium Zr
Required	0.4	0.5	1.2-2.0	0.3	2.1-2.9	0.18-0.28	-	5.1-6.1	0.2	-
Contents	0.05	0.16-0.17	1.4	0.03	2.4	0.19	-	5.8-5.9	0.08	-
Element	Ti+Zr	Na	Tin Sn	Bismuth Bi	Plumbum Pb	Mn+Cr	Ca	Other Elements		Al
								Each	Total	
Required	-	-	-	-	-	-	-	0.05	0.15	remainder
Contents	-	-	-	-	-	-	-	0.05	0.15	remainder
Other Tests										
Method	Macro-structure	Micro-structure	UT	Electro-conductivity	SCF	Contents H2 of metals cm <sup>3</sup> /100gr	Mercury - Free "Russia is country of melt and manufacture"			
Result	-	-	-	-	-	0.25				

On behalf:

OAO KUMZ

Date:

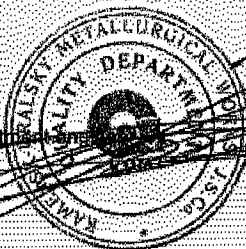
19.12.12

Inspector:

G.A.Ostanina

Inspection Department

N.V. Alekhina



Form № QAD/3-001, Revision 00

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402545986

CstAr

CstOr 249568

Wgt.: 2,156.000 LB

Date 06/20/2013



**CERTIFIED TEST REPORT**  
Constellium Rolled Products Ravenswood, LLC

4

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN

46544

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI

48086

COPPER&BR F76601 1800 INCLUSION SERIAL#: 20121125F76601 PAGE 1 OF 4

CUSTOMER PURCHASE ORDER NO. & ITEM 5400157805				Constellium ORDER NO. 110-512719	
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 6.00000	WIDTH 73.000	LENGTH 118.250
ITEM ORDERED TOOLING PLT-DIST/GE SPEC PLATE, SAWED MILL					
CUSTOMER SPECIFICATION AMS-QQ-A-250/12					
PART NUMBER ALFLR00645		B/L NUMBER F76600		DATE SHIPPED 11/26/12	
WEIGHT SHIPPED 10,810		NO. OF PIECES 2		GOVT. CONTRACT NO.	

**CERTIFICATION**  
"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."

Constellium Rolled Products Ravenswood, LLC  
Rt 2 South Century Road  
P.O. BOX 68  
RAVENSWOOD, WV 26164 USA

*Rodney J. Felty*  
Rodney J. Felty - Laboratory Manager

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS										
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.									
324071	LT	2	***** T651 61.4	62.7	44.4	45.9	***** 13.5	13.5											
All material contained in lot 324071 was cast and manufactured in the USA.																			
-----																			
ALL LOTS ON THIS CERTIFICATION ALSO CONFORM TO THE FOLLOWING REQUIREMENTS																			
-----																			
ROPERTIES ARE MN UIT 60-MN YLD=43; MN ELONG.=5% AMS 4045K AND ASTM B209-10																			
CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.
	SEE ACTUAL CHEMICAL COMPOSITION																		
	ALUMINUM REMAINDER																		

P-860-155D (06/11)

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402545990

CstAr

CstOr 249568

Wgt.: 527.000 LB

Date 06/20/2013

*John R. Zambetti*



# CERTIFIED TEST REPORT

Constellium Rolled Products Ravenswood, LLC

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN

46544

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI

48086

COPPER&BR F76601 1800 INCLUSION SERIAL#: 20121125F76601 PAGE 2 OF 4

CUSTOMER PURCHASE ORDER NO. & ITEM 5400157805				Constellium ORDER NO. 110-512719	
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 6.00000	WIDTH 73.000	LENGTH 118.250
ITEM ORDERED TOOLING PLT-DIST/GE SPEC PLATE, SAWED MILL					
CUSTOMER SPECIFICATION AMS-QQ-A-250/12					
PART NUMBER ALFLR00645			B/L NUMBER F76600		DATE SHIPPED 11/26/12
WEIGHT SHIPPED 10,810		NO. OF PIECES 2		GOVT. CONTRACT NO.	

**CERTIFICATION**  
"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."

Constellium Rolled Products Ravenswood, LLC  
Rt 2 South, Century Road  
P.O. BOX 68  
RAVENSWOOD, WV 26164 USA

*Rodney J. Felty*  
Rodney J. Felty - Laboratory Manager

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS										
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN	MAX									
THIS MATERIAL IS OVER 4" IN THICKNESS AND THEREFORE EXCEEDS THE SIZE RANGE OF ALL APPLICABLE SPECIFICATIONS. SINCE THE MAJORITY OF METAL IS SUPPLIED WITHIN THE SIZE RANGE OF APPLICABLE SPECIFICATIONS, OUR CONCERN IS THAT MATERIAL MAY BE INADVERTENTLY USED IN APPLICATIONS WHICH REQUIRE CHARACTERISTICS EXPECTED OF THICKNESS 4" AND BELOW. FOR THE MATERIAL DESCRIBED, STRENGTH AND OTHER CHARACTERISTICS CAN BE EXPECTED TO DIFFER FROM THOSE TYPICAL OF MATERIAL IN THE NORMAL SIZE RANGE. THIS MATERIAL SHOULD NOT BE USED IN APPLICATIONS WHICH REQUIRE CHARACTERISTICS EXPECTED IN THE NORMAL SIZE RANGE; THEREFORE YOUR CAREFUL CONTROL IS NECESSARY TO PREVENT MISAPPLICATION.																			
CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.
	SEE ACTUAL CHEMICAL COMPOSITION																		
	ALUMINUM REMAINDER																		

P-860-155D (06/11)

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402545990

CstAr

CstOr 249568

Wgt.: 527.000 LB

Date 06/20/2013

*John R. Zambetti*



COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN

46544



# CERTIFIED TEST REPORT

Constellium Rolled Products Ravenswood, LLC

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI

48086

COPPER&BR F76601 1800 INCLUSION SERIAL#: 20121125F76601 PAGE 3 OF 4

CUSTOMER PURCHASE ORDER NO. & ITEM 5400157805				Constellium ORDER NO. 110-512719		<b>CERTIFICATION</b> "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."  <b>Constellium Rolled Products Ravenswood, LLC</b> Rt 2 South, Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA  <i>Rodney J. Felty</i> Rodney J. Felty - Laboratory Manager
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 6.00000	WIDTH 73.000	LENGTH 118.250	
ITEM ORDERED TOOLING PLT-DIST/GE SPEC PLATE, SAWED MILL						
CUSTOMER SPECIFICATION <u>AMS-QQ-A-250/12</u>						
PART NUMBER ALFLR00645		B/L NUMBER F76600		DATE SHIPPED 11/26/12		
WEIGHT SHIPPED 10,810		NO. OF PIECES 2		GOVT. CONTRACT NO.		

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS											
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.										
324071	C		ACTUAL CHEMICAL COMPOSITION																	
			SI= 0.06	FE= 0.11	CU= 1.44	MN= 0.03	MG= 2.53													
			CR= 0.20	ZN= 5.53	TI= 0.04	ZR= 0.01														
			OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER																	
CHEM COMP	ALLOY		SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.
			SEE ACTUAL CHEMICAL COMPOSITION																	
			ALUMINUM REMAINDER																	

P-860-155D (06/11)

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402545990

CstAr

CstOr 249568

Wgt.: 527.000 LB

Date 06/20/2013



# CERTIFIED TEST REPORT

Constellium Rolled Products Ravenswood, LLC

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN

46544

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI

48086

COPPER&BR F76601 1800 INCLUSION SERIAL#: 20121125F76601 PAGE 4 OF 4

CUSTOMER PURCHASE ORDER NO. & ITEM 5400157805				Constellium ORDER NO. 110-512719		<b>CERTIFICATION</b> "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."  <b>Constellium Rolled Products Ravenswood, LLC</b> Rt 2 South, Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA  <i>Rodney J. Felty</i> Rodney J. Felty - Laboratory Manager	
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 6.00000	WIDTH 73.000	LENGTH 118.250		
ITEM ORDERED TOOLING PLT-DIST/GE SPEC PLATE, SAWED MILL							
CUSTOMER SPECIFICATION AMS-QQ-A-250/12							
PART NUMBER ALFLR00645		B/L NUMBER F76600		DATE SHIPPED 11/26/12			
WEIGHT SHIPPED 10,810		NO. OF PIECES 2		GOVT. CONTRACT NO.			

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS										
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.									
THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW.																			
CHEMISTRY BY OES: ARKSPARK																			
CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT.																			
WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399.																			
WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8; B557.																			
Mark Paperwork: ALFLR00645																			
DUNS Number: 090570149; CAGE Code: 1YWL9																			
Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the manufacture of our product.																			
"END OF CERTIFICATION"																			
CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.		
	SEE ACTUAL CHEMICAL COMPOSITION																		
	ALUMINUM REMAINDER																		

P-860-155D (06/11)

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402545990

CstAr

CstOr 249568

Wgt.: 527.000 LB

Date 06/20/2013





# CERTIFIED TEST REPORT

Constellium Rolled Products Ravenswood, LLC

4

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN

46544

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI

48086

COPPER&BR D00601 1800 INCLUSION SERIAL#: 20120919D00601 PAGE 1 OF 4

CUSTOMER PURCHASE ORDER NO. & ITEM 5400141009				Constellium ORDER NO. 110-512555	
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 6.00000	WIDTH 60.500	LENGTH 144.500
ITEM ORDERED TOOLING PLT-DIST/GE SPEC PLATE, SAWED MILL					
CUSTOMER SPECIFICATION <u>AMS-QQ-A-250/12</u>					
PART NUMBER ALFLR00645			B/L NUMBER D00600		DATE SHIPPED 09/20/12
WEIGHT SHIPPED 5,480		NO. OF PIECES 1		GOVT. CONTRACT NO.	

**CERTIFICATION**  
"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."

Constellium Rolled Products Ravenswood, LLC  
Rt 2 South, Century Road  
P.O. BOX 68  
RAVENSWOOD, WV 26164 USA

*Rodney J. Felty*  
Rodney J. Felty - Laboratory Manager

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS										
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.									
310191	LT	2	***** T651 80.4	80.5	69.9	70.2	***** 12.0	12.5											
All material contained in lot 310191 was cast and manufactured in the USA.																			
-----																			
ALL LOTS ON THIS CERTIFICATION ALSO CONFORM TO THE FOLLOWING REQUIREMENTS																			
-----																			
ROPERTIES ARE MN ULT 60-MN YLD=43; MN ELONG.=5% AMS 4045K AND ASTM B209-10																			
CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.
	SEE ACTUAL CHEMICAL COMPOSITION																		
ALUMINUM REMAINDER																			

P-860-155D (06/11)

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402545990

CstAr

CstOr 249568

Wgt.: 527.000 LB

Date 06/20/2013

*John R. Zambetti*



**CERTIFIED TEST REPORT**  
Constellium Rolled Products Ravenswood, LLC

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN

46544

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI

48086

COPPER&BR D00601 1800 INCLUSION SERIAL#: 20120919D00601 PAGE 2 OF 4

CUSTOMER PURCHASE ORDER NO. & ITEM 5400141009				Constellium ORDER NO. 110-512555	
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 6.00000	WIDTH 60.500	LENGTH 144.500
ITEM ORDERED TOOLING PLT-DIST/GE SPEC PLATE, SAWED MILL					
CUSTOMER SPECIFICATION AMS-QQ-A-250/12					
PART NUMBER ALFLR00645			B/L NUMBER D00600		DATE SHIPPED 09/20/12
WEIGHT SHIPPED 5,480		NO. OF PIECES 1		GOVT. CONTRACT NO.	

**CERTIFICATION**  
"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."

Constellium Rolled Products Ravenswood, LLC  
Rt 2 South, Century Road  
P.O. BOX 68  
RAVENSWOOD, WV 26164 USA

*Rodney J. Felty*  
Rodney J. Felty - Laboratory Manager

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS										
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.									
THIS MATERIAL IS OVER 4" IN THICKNESS AND THEREFORE EXCEEDS THE SIZE RANGE OF ALL APPLICABLE SPECIFICATIONS. SINCE THE MAJORITY OF METAL IS SUPPLIED WITHIN THE SIZE RANGE OF APPLICABLE SPECIFICATIONS, OUR CONCERN IS THAT MATERIAL MAY BE INADVERTENTLY USED IN APPLICATIONS WHICH REQUIRE CHARACTERISTICS EXPECTED OF THICKNESS 4" AND BELOW. FOR THE MATERIAL DESCRIBED, STRENGTH AND OTHER CHARACTERISTICS CAN BE EXPECTED TO DIFFER FROM THOSE TYPICAL OF MATERIAL IN THE NORMAL SIZE RANGE. THIS MATERIAL SHOULD NOT BE USED IN APPLICATIONS WHICH REQUIRE CHARACTERISTICS EXPECTED IN THE NORMAL SIZE RANGE; THEREFORE YOUR CAREFUL CONTROL IS NECESSARY TO PREVENT MISAPPLICATION.																			
CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.
	SEE ACTUAL CHEMICAL COMPOSITION																		
	ALUMINUM REMAINDER																		

P-860-155D (08/11)

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402545990

CstAr

CstOr 249568

Wgt.: 527.000 LB

Date 06/20/2013

*John R. Zambetti*



**CERTIFIED TEST REPORT**  
Constellium Rolled Products Ravenswood, LLC

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN

46544

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI

48086

COPPER&BR D00601 1800 INCLUSION SERIAL#: 20120919D00601 PAGE 3 OF 4

CUSTOMER PURCHASE ORDER NO. & ITEM 5400141009				Constellium ORDER NO. 110-512555		<b>CERTIFICATION</b> "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."  Constellium Rolled Products Ravenswood, LLC Rt 2 South Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA  <i>Rodney J. Felty</i> Rodney J. Felty - Laboratory Manager	
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 6.00000	WIDTH 60.500	LENGTH 144.500		
ITEM ORDERED TOOLING PLT-DIST/GE SPEC PLATE, SAWED MILL							
CUSTOMER SPECIFICATION AMS-QQ-A-250/12							
PART NUMBER ALFLR00645		B/L NUMBER D00600		DATE SHIPPED 09/20/12			
WEIGHT SHIPPED 5,480		NO. OF PIECES 1		GOVT. CONTRACT NO.			

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS										
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN	MAX									
310191	C		ACTUAL CHEMICAL COMPOSITION																
			SI= 0.06	FE= 0.14	CU= 1.48	MN= 0.04	MG= 2.51												
			CR= 0.21	ZN= 5.58	TI= 0.02	ZR= 0.00													
			OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER																
CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.
		SEE ACTUAL CHEMICAL COMPOSITION																	
		ALUMINUM REMAINDER																	

P-860-155D (06/11)

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402545990

CstAr

CstOr 249568

Wgt.: 527.000 LB

Date 06/20/2013

*John R. Zambetti*



# CERTIFIED TEST REPORT

Constellium Rolled Products Ravenswood, LLC

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI

46544

48086

COPPER&BR D00601 1800 INCLUSION SERIAL#: 20120919D00601 PAGE 4 OF 4

CUSTOMER PURCHASE ORDER NO. & ITEM 5400141009				Constellium ORDER NO. 110-512555	
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 6.00000	WIDTH 60.500	LENGTH 144.500
ITEM ORDERED TOOLING PLT-DIST/GE SPEC PLATE, SAWED MILL					
CUSTOMER SPECIFICATION AMS-QQ-A-250/12					
PART NUMBER ALFLR00645			B/L NUMBER D00600		DATE SHIPPED 09/20/12
WEIGHT SHIPPED 5,480		NO. OF PIECES 1		GOVT. CONTRACT NO.	

**CERTIFICATION**  
"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."

Constellium Rolled Products Ravenswood, LLC  
Rt 2 South Century Road  
P.O. BOX 68  
RAVENSWOOD, WV 26164 USA

*Rodney J. Felty*  
Rodney J. Felty - Laboratory Manager

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS										
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN	MAX									
THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW.																			
CHEMISTRY BY OES: ARKSPARK																			
CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT.																			
WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399.																			
WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8; B557.																			
Mark Paperwork: ALFLR00645																			
DUNS Number: 090570149; CAGE Code: 1YWL9																			
Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the manufacture of our product.																			
"END OF CERTIFICATION"																			
CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.		
	SEE ACTUAL CHEMICAL COMPOSITION																		
	ALUMINUM REMAINDER																		

P-860-155D (06/11)

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402545990

CstAr

CstOr 249568

Wgt.: 527.000 LB

Date 06/20/2013

*John R. Zambetti*



**CERTIFIED TEST REPORT**  
Constellium Rolled Products Ravenswood, LLC

4

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN

46544

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI

48086

COPPER&BR K04903 1800 INCLUSION SERIAL#: 20130205K04903 PAGE 1 OF 4

CUSTOMER PURCHASE ORDER NO. & ITEM 5400166526				Constellium ORDER NO. 110-512841		<b>CERTIFICATION</b> "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."  <b>Constellium Rolled Products Ravenswood, LLC</b> Rt 2 South Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA  <i>Rodney J. Felty</i> Rodney J. Felty - Laboratory Manager
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 6.00000	WIDTH 73.000	LENGTH 118.250	
ITEM ORDERED TOOLING PLT-DIST/GE SPEC PLATE, SAWED MILL						
CUSTOMER SPECIFICATION <u>AMS-QQ-A-250/12</u>						
PART NUMBER ALFLR00645		B/L NUMBER K04900		DATE SHIPPED 02/05/13		
WEIGHT SHIPPED 10,850		NO. OF PIECES 2		GOVT. CONTRACT NO.		

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS										
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN	MAX									
348891	LT	2	***** T651 62.6	62.9	45.9	46.3	***** 12.5	13.0											
All material contained in lot 348891 was cast and manufactured in the USA.																			
-----																			
ALL LOTS ON THIS CERTIFICATION ALSO CONFORM TO THE FOLLOWING REQUIREMENTS																			
-----																			
ROPERTIES ARE MN ULT 60-MN YLD=43; MN ELONG.=5% AMS 4045K AND ASTM B209-10																			
CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.
	SEE ACTUAL CHEMICAL COMPOSITION																		
	ALUMINUM REMAINDER																		

P-860-155D (06/11)

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402545990

CstAr

CstOr 249568

Wgt.: 527.000 LB

Date 06/20/2013

*John R. Zambetti*



# CERTIFIED TEST REPORT

Constellium Rolled Products Ravenswood, LLC

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN

46544

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI

48086

COPPER&BR K04903 1800 INCLUSION SERIAL#: 20130205K04903 PAGE 2 OF 4

CUSTOMER PURCHASE ORDER NO. & ITEM 5400166526				Constellium ORDER NO. 110-512841	
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 6.00000	WIDTH 73.000	LENGTH 118.250
ITEM ORDERED TOOLING PLT-DIST/GE SPEC PLATE, SAWED MILL					
CUSTOMER SPECIFICATION AMS-QQ-A-250/12					
PART NUMBER ALFLR00645			B/L NUMBER K04900		DATE SHIPPED 02/05/13
WEIGHT SHIPPED 10,850		NO. OF PIECES 2		GOVT. CONTRACT NO.	

**CERTIFICATION**  
"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."

Constellium Rolled Products Ravenswood, LLC  
Rt 2 South, Century Road  
P.O. BOX 68  
RAVENSWOOD, WV 26164 USA

*Rodney J. Felty*  
Rodney J. Felty - Laboratory Manager

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS										
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN	MAX									
			THIS MATERIAL IS OVER 4" IN THICKNESS AND THEREFORE EXCEEDS THE SIZE RANGE OF ALL APPLICABLE SPECIFICATIONS. SINCE THE MAJORITY OF METAL IS SUPPLIED WITHIN THE SIZE RANGE OF APPLICABLE SPECIFICATIONS, OUR CONCERN IS THAT MATERIAL MAY BE INADVERTENTLY USED IN APPLICATIONS WHICH REQUIRE CHARACTERISTICS EXPECTED OF THICKNESS 4" AND BELOW. FOR THE MATERIAL DESCRIBED, STRENGTH AND OTHER CHARACTERISTICS CAN BE EXPECTED TO DIFFER FROM THOSE TYPICAL OF MATERIAL IN THE NORMAL SIZE RANGE. THIS MATERIAL SHOULD NOT BE USED IN APPLICATIONS WHICH REQUIRE CHARACTERISTICS EXPECTED IN THE NORMAL SIZE RANGE; THEREFORE YOUR CAREFUL CONTROL IS NECESSARY TO PREVENT MISAPPLICATION.																
CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.
		SEE ACTUAL CHEMICAL COMPOSITION																	
		ALUMINUM REMAINDER																	

P-860-155D (06/11)

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402545990

CstAr

CstOr 249568

Wgt.: 527.000 LB

Date 06/20/2013

*John R. Zambetti*



# CERTIFIED TEST REPORT

Constellium Rolled Products Ravenswood, LLC

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN

46544

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI

48086

COPPER&BR K04903 1800 INCLUSION SERIAL#: 20130205K04903 PAGE 3 OF 4

CUSTOMER PURCHASE ORDER NO. & ITEM 5400166526				Constellium ORDER NO. 110-512841	
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 6.00000	WIDTH 73.000	LENGTH 118.250
ITEM ORDERED TOOLING PLT-DIST/GE SPEC PLATE, SAWED MILL					
CUSTOMER SPECIFICATION <u>AMS-QQ-A-250/12</u>					
PART NUMBER ALFLR00645		B/L NUMBER K04900		DATE SHIPPED 02/05/13	
WEIGHT SHIPPED 10,850		NO. OF PIECES 2		GOVT. CONTRACT NO.	

CERTIFICATION

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Constellium Rolled Products Ravenswood, LLC  
Rt 2 South Century Road  
P.O. BOX 68  
RAVENSWOOD, WV 26164 USA

*Rodney J. Felty*  
Rodney J. Felty - Laboratory Manager

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS											
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN	MAX										
348891	C		ACTUAL CHEMICAL COMPOSITION																	
			SI= 0.07	FE= 0.15	CU= 1.53	MN= 0.04	MG= 2.46													
			CR= 0.19	ZN= 5.55	TI= 0.03	ZR= 0.01														
			OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER																	
CHEM COMP	ALLOY		SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.
			SEE ACTUAL CHEMICAL COMPOSITION																	
			ALUMINUM REMAINDER																	

P-860-155D (06/11)

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402545990

CstAr

CstOr 249568

Wgt.: 527.000 LB

Date 06/20/2013

*John R. Zambetti*



# CERTIFIED TEST REPORT

Constellium Rolled Products Ravenswood, LLC

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN

46544

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI

48086

COPPER&BR K04903 1800 INCLUSION SERIAL#: 20130205K04903 PAGE 4 OF 4

CUSTOMER PURCHASE ORDER NO. & ITEM 5400166526				Constellium ORDER NO. 110-512841		<b>CERTIFICATION</b> "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."  <b>Constellium Rolled Products Ravenswood, LLC</b> Rt 2 South, Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA  <i>Rodney J. Felty</i> Rodney J. Felty - Laboratory Manager	
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 6.00000	WIDTH 73.000	LENGTH 118.250		
ITEM ORDERED TOOLING PLT-DIST/GE SPEC PLATE, SAWED MILL							
CUSTOMER SPECIFICATION AMS-QQ-A-250/12							
PART NUMBER ALFLR00645		B/L NUMBER K04900		DATE SHIPPED 02/05/13			
WEIGHT SHIPPED 10,850		NO. OF PIECES 2		GOVT. CONTRACT NO.			

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS											
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.										
THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW.																				
CHEMISTRY BY OES: ARKSPARK																				
CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT.																				
WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399.																				
WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8; B557.																				
Mark Paperwork: ALFLR00645																				
DUNS Number: 090570149; CAGE Code: 1YWL9																				
Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the manufacture of our product.																				
"END OF CERTIFICATION"																				
CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS		
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.	
	SEE ACTUAL CHEMICAL COMPOSITION																			
																		ALUMINUM REMAINDER		

P-860-155D (06/11)

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402545990

CstAr

CstOr 249568

Wgt.: 527.000 LB

Date 06/20/2013



4

CERTIFIED INSPECTION REPORT

Alcoa Inc.

DAVENPORT WORKS 4879 State Street Bettendorf, IA 52722

Ship From: RIVERDALE, IA.

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet. This test report shall not be reproduced except in full, without the written approval of the Quality Department. No alteration, addition or other change is authorized to be made to this certificate. The recording of false, fictitious, or otherwise fraudulent statements or entries on this certificate by any recipient may be punished as a felony under applicable law.

*Rob Woodall*

Rob Woodall  
Director of Manufacturing Davenport Works

*Terrence Thom*  
Quality Assurance Manager

Page 1 of 2

1444880  
Ship Date 2012-10-18 B.I. No. 7439252 Invoice No. 00000 Alcoa No. Item 1000420518-7 DP-20518-7  
P.O. No./Govt Contract No. 5400155433 Ln#: 0070 C&B G041014515R08 Customer Alcoa Item

Ship To: COPPER & BRASS SALES INC  
1015 SAINT JEROME ST.  
MISHAWAKA 46544 IN

Item Description  
6.03 IN TK (+.260 -0.00) X 60.5 IN W (+.500 -  
0.000) X 144.5 IN LN (+.5 -0.0) (N) A/T 7075-  
T651 RECTANGULAR MILL FINISH, SAWED. EXC MKR, PROP, TK AMS-00-A-  
(250/12) IS 2007 EXC MKR, PROP, TK AMS4045 REV K EXC MKR, PROP,  
TK ASTM B209 REV 10 (MARKED) KRAFT PAPER  
INTERLEAVED MAX  
GROSS SKID WGT: 6000 LB QUAN TOL +/-40 %  
COR 0164707 REV 07 CUST REQ 12-10-  
17 \*\*\* W/E 12-10-20 \*\*\*

Num	Package Ticket	Lot	Weight	Quantity	UOM	Inspector	Clock Numbers
1	449914	587641	5494	1	PC	47357	

COR: 0164707.7 -Specification Limits

Temp Dir	UTS	TYS	ELAD
T651 Long Transv.	Max	KSI	PCT
	Min	59	40

Chemical Composition	SI	FE	CU	MN	MG	CR	ZN	TI	Each	Other
	Max	0.40	0.50	0.30	2.9	0.28	6.1	0.20	0.05	0.15
	Min	1.2	2.1	0.18	5.1					
Alloy 7075	No->	UTS	TYS	ELAD						
Lot: 587641	- Mechanical, Physical, Metallography, Quantometer Results									REMAIN
Temp Dir	Test	KSI	KSI	PCT						
T651 Long Transv.	2	71.2	58.9	8.2						
		70.1	57.6	8.4						

From: ThyssenKrupp Materials NA  
Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402545990  
Cst&R Cst&R 249568  
Wgt.: 527.000 LB Date 06/20/2013

*John A. Gumbert*

# CERTIFIED INSPECTION REPORT

Alcoa Inc.

DAVENPORT WORKS 4879 State Street Bettendorf, IA 52722

Ship From: RIVERDALE, IA.

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

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Per:

*Rob Woodall*

Rob Woodall

*Terrence Thom*

Terrence Thom

Director of Manufacturing Davenport Works

Quality Assurance Manager

Page 2 of 2

Lot: 587641 - Mechanical, Physical, Metallurgy, Quantometer Results (cont.) -----  
 Cast Number Chemical - OES SI FE CU MN MG CR ZN TI  
 H9020021 Actuals 0.06 0.30 1.6 0.02 2.5 0.19 5.8 0.02

This material was melted in the United States or a Qualifying Country [REF DFARS 225.872.1(a)]; it was manufactured in the United States

1444880	0			
Ship Date	B.L. No.	Invoice No.	Alcoa No.	Item
2012-10-18	7439252	00000	1000420518-7	DP-20518-7
P.O. No./Govt Contract No.		Customer Alcoa Item		
5400155433	Ln#: 0070	C&B	G041014515R08	

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402545990

CstAr

CstOr 249568

Wgt.: 527.000 LB

Date 06/20/2013

*Robert J. Smith*

**COPPER AND BRASS SALES****MATERIAL TYPE****ALUMINIUM ALLOYS****PRODUCT DESIGNATION****2014 2024 2224 2324 7050 7075 7150 7175 7475 ALUMEC 89 ALUMEC 99 QC-7****"WARNING"**

SMALL CHIPS,FINE TURNINGS AND DUST MAY IGNITE READILY.EXPLOSION POTENTIAL MAY BE PRESENT WHEN:DUST OR FINES ARE DISPERSED IN THE AIR; FINE, DUST OR MOLTEN ALUMINUM ARE IN CONTACT WITH CERTAIN METAL OXIDES; OR,CHIPS,FINES,DUST OR MOLTEN ALUMINUM ARE IN CONTACT WITH WATER OR MOISTURE.KEEP AWAY FROM IGNITION SOURCE.USE EXPLOSION-PROOF VENTILATION.KEEP MATERIAL DRY.

THIS PRODUCT CONTAINS BERYLLIUM AND COPPER.INHALING BERYLLIUM DUST OR FUMES MAY CAUSE CHRONIC BERYLLIUM DISEASE (CBD),A SERIOUS CHRONIC LUNG DISEASE IN SOME INDIVIDUALS.BERYLLIUM IS A CANCER HAZARD;OVER TIME CBD AND CANCER CAN BE FATAL,TARGET ORGAN IS PRIMARILY THE LUNG.INHALING LARGE AMOUNTS OF COPPER,MAGNESIUM OXIDE,MANGANESE OXIDE,AND ZINC OXIDE FUMES OR DUST MAY CAUSE METAL FUME FEVER WITH FLU-LIKE SYMPTOMS.CHRONIC OVEREXPOSURE TO COPPER MAY CAUSE THICKENING OF THE SKIN;AND SKIN,TEETH,AND HAIR DISCOLORATION.CHRONIC OVEREXPOSURE TO MANGANESE DUST CAN CAUSE CENTRAL NERVOUS SYSTEM DAMAGE,SCARRING OF THE LUNGS AND REPRODUCTIVE HARM IN MALES.TARGET ORGAN IS PRIMARILY THE LUNG,BUT REPEATED HIGH EXPOSURE CAN ALSO AFFECT THE LIVER.CHRONIC OVEREXPOSURE TO IRON OXIDE DUST/FUME MAY CAUSE LUNG SIDEROSIS.CHRONIC OVEREXPOSURE TO SILICON DUST CAN CAUSE CHRONIC BRONCHITIS.OVEREXPOSURE TO AMORPHOUS SILICA CAN CAUSE DRYING OF THE MUCOUS MEMBRANES OF THE EYES,NOSE,AND THROAT.

THIS PRODUCT ALSO CONTAINS NICKEL AND CHROMIUM COMPOUNDS.INHALATION OF NICKEL DUST OR FUME MAY RESULT IN INFLAMMATION OF THE RESPIRATORY TRACT AND CAUSE NASAL AND/OR LUNG CANCER.NICKEL HAS BEEN IDENTIFIED AS A POTENTIAL HUMAN CARCINOGEN.EXPOSURE TO CHROMIUM DUST OR FUMES MAY CAUSE METAL FUME FEVER WITH FLU-LIKE SYMPTOMS AND KIDNEY AND LIVER DAMAGE.UNDER HIGH TEMPERATURES,HEXAVALENT CHROMIUM MAY BE PRODUCED,IF IN THE INSOLUBLE FORM,IT IS A CONFIRMED HUMAN CARCINOGEN.(CALIFORNIA PROPOSITION 65).

IF COATED WITH OIL,MAY CAUSE SKIN IRRITATION/DERMATITIS BY CONTACT.WELDING FUME IS LISTED AS A POSSIBLE CARCINOGENIC TO HUMANS.

READ THE ALUMINIUM/ALUMINIUM ALLOYS MATERIAL SAFETY DATA SHEET (MSDS) ON FILE WITH YOUR EMPLOYER BEFORE WORKING WITH THIS MATERIAL.

\* If processing or recycling produces particulate,use exhaust ventilation or other controls designed to prevent exposure to workers. Examples of such activities include melting, welding,grinding,abrasive sawing,sanding and polishing.Any activity which abrades the surface of this material can generate airborne particulate.Use appropriate NIOSH approved respiratory protection (P95; P100 for lead with, quantitative fit testing required) if exposures exceed the permissible limits.

\* The Occupational Safety and Health Administration (OSHA) have set mandatory limits on occupational exposures.

\* Aluminum, in solid form and as contained in finished products presents no special health risk.

\* Sold for manufacturing purposes only.This product can be recycled; contact your sales representative.

For additional information, call or write to Copper and Brass Sales,22355 West Eleven Mile Road, Southfield, MI 48033,telephone 248-233-5600, or visit our web site @ [www.copperandbrass.com](http://www.copperandbrass.com).



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO20247**

Purchase Order Date 6/19/2013

PO Print Date 6/19/2013

Page Number 1 of 2

**Order From :**

VC-COP001

**Ship To :** DART AEROSPACE LTD

THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"  
TORONTO, ON M5W 5V8  
CA

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**PAID**  
6/13/2013

**Contact Name**

**Vendor Phone**

905 669 9444

**Ship To Contact**

**Ship To Phone**

**Ship Via:**

Yours ppd

**Ship Acct:**

**Buyer**

**Customer POID**

**Customer Tax #**

**Terms**

**Currency**

**FOB**

Chantal Lavoie

10127-2607

Net 30

CAD

Destination-Collect

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	List Price	Disc %	Discounted Unit Price	Extended Price
1	M7075T6B4.000X4.500  MATERIAL: 7075-T6/T651/T6510/T6511/T62 ALUMINUM BAR AS PER AMS-QQ-A-225/9 OR AMS 4122/4123/4186/4187 PR PER AMS-QQ-A-200/11 OR QQ-A- 250/12 CUT FROM PLATE NOTE: CUT 20 PCS TO SIZE 9.250"	7075-T6 BAR 4.000' X 4.500"	6/28/2013  Yes 6/28/2013		15.42  f				\$1,395.00
Line Total:									\$1,395.00
2	M7075T6B2.250X02.750  MATERIAL SPEC'S SAME AS ABOVE	7075-T6 BAR 2.250' X 2.750"	6/28/2013  Yes 6/28/2013		120.00  f				\$3,625.00
Line Total:									\$3,625.00

Note:

6/19/2013

43/6/26



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO20247**

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Page Number 2 of 2

Order From : VC-COP001  
THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"  
TORONTO, ON M5W 5V8  
CA

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Contact Name  
Vendor Phone 905 669 9444  
  
Ship To Contact  
Ship To Phone  
Ship Via: Yours ppd  
Ship Acct:

Buyer  
Customer POID  
Customer Tax # 10127-2607  
Terms Net 30  
Currency CAD  
FOB Destination-Collect

3	M7075T6B3.000X04.500	7075-T6 BAR 3.000' X 4.500"	6/28/2013	124.67	\$8,086.76
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MATERIAL SPEC'S SAME AS ABOVE NOTE: CUT 44 PCS ✓  
TO SIZE 34.000" ✓  
Yes 6/28/2013

Line Total: \$8,086.76

4	M7075T6B6.000X6.000	7075-T6 BAR 6.000' X 6.000" (order in billets)	6/28/2013	12.08	\$2,050.00
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MATERIAL SPEC'S SAME AS ABOVE NOTE: CUT 20 PCS  
TO SIZE 7.2500"  
Yes 6/28/2013

Line Total: \$2,050.00

PO Total: \$15,156.75

MATERIAL CERTIFICATION  
REQ'D UPON DELIVERY

Note: Pricing listed above is as per contract agreement between Dart Aerospace and the respective manufacturer.

No substitution or deviation without consent.

Certificate of Conformity or Material Certification required ☒ YES ☐ NO

Change Nbr: 1

Change Date: 6/19/2013